CATEGORY Health and Safety	PROJECT Rocky Mountain Arsenal		Project: Plan HS-001-RMA (Rev.7)
TITLE Health and Safety Plan for the Program Management Contract		LEGEND R-INDICATES REVISION	DATE 03/17/2004 Revised
		APPROVED BY	REPLACES ISSUE OF 09/26/2002 (Rev.6)

Purpose

The purpose of this Health and Safety Plan (HASP) is to define the health and safety-related planning process, requirements, and procedures to be used for the safe and compliant execution of work conducted under the Program Management Contract (PMC) at the Rocky Mountain Arsenal (RMA).

Responsible Contact

Andrew Strickland

Tetra Tech FW INCORPORATED

ROCKY MOUNTAIN ARSENAL

NOTICE OF OWNERSHIP AND CONDITIONS OF USE

This document is the property of Tetra Tech FW Incorporated (TtFW) and is loaned for use subject to recall for any reason at any time without prior notice and with the distinct understanding that it is to be used only for the duration of and in connection with the performance of work for TtFW. Please observe that the material herein is copyrighted and protected by the laws pertaining to copyright.

Should any circumstances arise under which you will no longer require this document for the specific purpose for which it is loaned to you, it must be returned promptly. Under no circumstance shall this document be transferred or loaned to any other individual, firm, or corporation without the express written permission of the CEO or designee.

In the event such permission is obtained, the person who obtains such permission shall be responsible for obtaining compliance with the conditions set forth in this Notice by any person to whom he/she may loan this document.

This document will be updated periodically as new concepts and practices are developed. Such revisions shall be effected by issuing new or revised sections to ensure uniform practices. Deviations to the enclosed information may be authorized, when appropriate, based upon warranted circumstances.

Sections shall not be removed from this document except as required by revisions or cancellations. Employees are not to rely on printed versions of this document and shall refer to the Lotus Notes database for the most current requirements.

Copyright © 2003
Tetra Tech FW Incorporated
Rocky Mountain Arsenal
Proprietary Information

Table of Contents

Section

1.0	INTRODUCTION
2.0	PROJECT ORGANIZATION AND RESPONSIBILITIES
3.0	SITE HISTORY AND CONTAMINANTS
4.0	TASK-SPECIFIC HEALTH AND SAFETY PLANS
5.0	POTENTIAL SITE HAZARDS AND CONTROLS
6.0	PERSONAL PROTECTIVE EQUIPMENT
7.0	SITE MONITORING
8.0	SITE CONTROL
9.0	DECONTAMINATION AND DISPOSAL
10.0	COMMUNICATIONS
11.0	MEDICAL SURVEILLANCE AND QUALIFICATION
12.0	WORKER TRAINING AND QUALIFICATION
13.0	SAFETY MEETINGS
14.0	INSPECTIONS
15.0	INCIDENT REPORTING AND INVESTIGATION
16.0	SITE SAFETY PROCEDURES
17.0	EMERGENCY RESPONSE ACTION PLAN
18.0	RECORDS AND REPORTS
19.0	REFERENCES

APPENDICES

- A Task-Specific Health and Safety Plan Format
- B Activity Hazard Analysis Format

TABLES

5-1 Properties of the Primary Contaminants of Concern
 7-1 Permissible Heat Exposure TLV®* (in °C and °F)
 7-2 Suggested Frequency of Physiological Monitoring for Fit and Acclimatized Workers
 7-3 Physiological Measurements and Actions

FIGURES

PMC Voluntary Protection Program Poster

2-1	PMC Line Management and Safety Organizational Structure
3-1	RMA Site Map
4-1	Health and Safety Field Change Request Form
5-1	Areas of Contamination
7-1	Anticipated Site Monitoring Requirements for Remedial Implementation Projects
7-2	Daily Site Monitoring Report Form
7-3	Weekly Site Monitoring Summary Report
7-4	Air Monitoring Data Sheet
7-5	Heat Stress Physiological Monitoring Form
7-6	Air Monitoring Calculations
8-1	Typical Site Zone Layout
8-2	Typical Signage for Contaminated Areas
8-3	Typical Signage for Other Controlled Areas
9-1	Typical Decontamination Area Layout
10-1	Typical Hand Signals
11-1	Emergency Data Sheet
12-1	Example Personnel Training Tracking Form
12-2	Record of 3-Day Supervised Field Experience
13-1	Daily Safety Meeting Sign-In Sheet
14-1	Site Inspection Form
14-2	Safety Observations of the Day Form and Guidelines
15-1	Incident Report Form
15-2	Investigation Report Form
15-3	Incident Report and Investigation Instructions
16-1	Hot Work Permit Form
16-2	Confined Space Pre-Entry Checklist
16-3	Confined Space Entry Permit Form
16-4	Line Breaking Checklist
16-5	Construction Equipment/Vehicle Inspection Checklist
16-6	Critical Lift Plan Format
16-7	ZIP SLIP

1-1

- 17-1 Emergency Action Plan Drill Evaluation and Follow-up Forms
- 18-1 Weekly Safety Report Cover Sheet
- 18-2 Chemical Inventory Report Form
- 18-3 Field Team Review of HASP

ACRONYMS

ACGIH American Conference of Governmental Industrial Hygienists

ACM Asbestos-Containing Material
AHA Activity Hazard Analysis
APR Air Purifying Respirators

CERCLA Comprehensive Environmental Response, Compensation and Liability Act

CCG Construction Coordination Group
CDL Commercial Driver's License
CFR Code of Federal Regulations
CPR Cardiopulmonary Resuscitation
CRA Central Remediation Area
CRZ Contamination Reduction Zone
CWM Chemical Warfare Materiel

dBA Decibels, A Scale

EHSSC Environmental Health and Safety Steering Committee

EPA U.S. Environmental Protection Agency ESQ Environmental Safety and Quality

EZ Exclusion Zone
FCR Field Change Request
FES Fire and Emergency Services
FFA Federal Facility Agreement

FWENC Foster Wheeler Environmental Corporation

HASP Health and Safety Plan

HPS Hantavirus Pulmonary Syndrome
HSS Health and Safety Supervisor
HWL Hazardous Waste Landfill
ICP Integrated Contingency Plan
IRA Interim Response Action
KBR Kellogg Brown & Root
MSDS Material Safety Data Sheet

NIOSH National Institute for Occupational Safety and Health

OE Ordnance/Explosives

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

PMC Program Management Contract(or)
PPE Personal Protective Equipment
RCWM Recovered Chemical Warfare Materiel

RMA Rocky Mountain Arsenal ROD Record of Decision

RVO Remediation Venture Office

SLM Sound Level Meter

SQI Submerged Quench Incinerator

SZ Support Zone

TLV

Threshold Limit Value
Treatment, Storage and Disposal
Tetra Tech FW Incorporated
Time-Weighted Average TSD TTFW TWA USFWS U.S. Fish and Wildlife Service UXO **Unexploded Ordnance**

Voluntary Protection Program(s) VPP WBGT Wet Bulb Globe Temperature

WNV West Nile Virus

ZIP Zero Incident Performance

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Health and Safety Plan (HASP) is to define the health and safety-related planning process, requirements, and procedures to be used for the safe and compliant execution of work conducted under the Program Management Contract (PMC) at the Rocky Mountain Arsenal (RMA).

1.2 Scope

This HASP covers activities conducted under the PMC, including site support operations, clean construction work and activities that fall under the scope of the Occupational Safety and Health Administration (OSHA) Standards for Hazardous Waste Operations and Emergency Response, Title 29 Code of Federal Regulations (CFR) 1910.120 and 29 CFR 1926.65.

The PMC, PMC Subcontractors, and their lower-tier subcontractors are responsible for implementing the Record of Decision (ROD) (FWENC 1996) regarding the selected remedial actions for the On-Post Operable Unit at RMA. Work includes execution of remedial implementation projects described in the Site-Wide Implementation Plan and other projects as identified by the Remediation Venture Office (RVO). Typical operations include demolition of structures, excavation and movement of soils, water treatment facility construction and operation, landfill construction and waste placement, other remedial actions, construction projects, and site support operations necessary to facilitate transition of the site to a National Wildlife Refuge.

The HASP applies to all personnel who wish to gain access to active field worksites managed by the PMC, including, but not limited to, the following:

- PMC employees (Tetra Tech FW Incorporated Kellogg Brown and Root Golder Associates, and Enscicon) PMC Subcontractors and lower-tier subcontractors
- RVO employees, representatives, and subcontractors
- Federal, state, or local government or community representatives

In general, all sections of this HASP are applicable to field work and site support operations, unless a specific exemption is made and worker safety is maintained. Specific exemptions are made in the Subcontractor Health and Safety Requirements section of subcontracts, the task-specific HASP process (Section 4), or as authorized by the PMC Health and Safety Manager or Supervisor.

1.3 Approach to Safety

The PMC safety culture begins with *Zero Incident Performance* (ZIP) as an expectation and promotes continuous improvement in safety performance. ZIP means error-free, incident-free project execution: no injuries, illnesses, property damage, or adverse community or environmental impacts. ZIP does not happen by chance—it is achieved through the integration of safety into all management systems, the project process, and by individual effort. The PMC believes that all incidents are preventable.

Loss control management principles provide the framework for integrating our safety culture and values into the execution of our work. Health and safety programs, plans, and procedures define the applicable safety requirements and clearly specify the performance and behavior expected from each PMC and PMC Subcontractor employee. Training is provided and/or required to ensure an understanding of the requirements. Communications, awareness, and recognition reinforce the training effort and provide motivation for the achievement of safety excellence. Monitoring and evaluation of PMC and PMC Subcontractor safety performance provides feedback on the effectiveness of the overall safety program and results in continuous safety program improvement through implementation of lessons learned.

This programmatic approach to safety establishes a work environment in which safety is a prerequisite and employee work practices reflect the RVO/PMC safety culture.

1.4 Voluntary Protection Program

The PMC and PMC Subcontractors (including lower-tier subcontractors) shall implement and maintain a safety program on-site consistent with the OSHA Voluntary Protection Program (VPP) requirements and guidelines. It is recognized that safety programs which go beyond mere compliance with OSHA standards achieve better safety performance and fewer worker injuries or illnesses, and save money. The health and safety management system described and required by the PMC HASP is intended to fulfill OSHA VPP standards. Specifically, PMC and PMC Subcontractor safety programs shall, at a minimum, include the elements described below and elsewhere in this plan.

Management Commitment – On-site management, supervisors, and foremen show proactive, visible leadership for the safety program. This includes active involvement in safety meetings and safety inspections, including safety concern in the planning, budgeting, and scheduling process, and recognizing or rewarding employees for participation in safety programs and practicing safe work behaviors.

Employee Involvement – At least three meaningful avenues for employee involvement in the safety program are provided onsite including, as a minimum, involvement in 1) safety meetings (daily or periodic, and the monthly subcontractor safety meeting), 2) safety inspections (periodic, weekly, and/or monthly), and 3) participation in the Safety Observer program. Additional avenues for employee involvement are encouraged, such as employee development or review of the task-specific HASP and Activity Hazard Analyses (AHAs), participation in incident reporting and investigation, development and presentation of safety training, participation in the ZIP SLIP program, providing input to the Environmental Health and Safety Steering Committee (EHSSC), and participation in project or department safety committees.

Worksite Analysis – A worksite analysis program shall be developed and maintained including safety inspections, participation in periodic health and safety reviews, surveillances and audits, worksite monitoring (physical, chemical and biological hazards), tracking and trending of incidents and corrective actions, and provision of adequate, qualified health and safety resources for the work.

Hazard Prevention and Control – A worksite free of recognized hazards must be maintained. Work shall be planned to prevent or eliminate hazards where feasible. Adequate resources must be provided to control hazards using the following hierarchy, engineering controls, work practice or administrative controls and, lastly, Personal Protective Equipment (PPE). Adequate resources must be available to abate potential hazards in a timely manner.

Safety and Health Training – A complete safety and health training program shall be implemented and maintained to meet regulatory requirements and ensure that employees are adequately trained to perform work safely. Employees shall be trained to applicable plans and procedures and be aware of the health and safety hazards of the work, signs and symptoms of overexposure, and ways to protect themselves from workplace hazards. Additionally, employees shall be apprised of their rights and responsibilities under the Occupational Safety and Health Act.

A summary of the on-site VPP suitable for posting and training employees is provided in Figure 1-1. Additional information on VPP is available from the PMC Health and Safety staff and at the website http://osha.gov/oshprogs/vpp/.

1.5 Applicable Requirements

The PMC and each PMC Subcontractor shall comply with applicable portions of the following codes, regulations, and standards when performing work at RMA:

- Public Law 91-596, Occupational Safety and Health Act of 1970, Section 5(a)(1), "General Duty Clause"
- 29 CFR 1910, General Industry Safety and Health Standards
- 29 CFR 1926, Construction Industry Safety and Health Standards
- 29 CFR 1904, Recording and Reporting Occupational Injuries and Illnesses
- 49 CFR, Department of Transportation
- 10 CFR 834 and 10 CFR 835, Occupational Radiation Protection
- DOD STD 6055.9, Department of Defense Standard, Ammunition and Explosives Safety
- AR 385-64, Department of Army Regulation, Ammunition and Explosives Safety
- DA PAM 385-64, Department of Army Pamphlet, Ammunition and Explosives Safety Standards
- AR 50-6, Department of Army Regulation, Chemical Surety
- AR 385-61, Department of Army Regulation, Army Chemical Agent Safety Program
- DA PAM 385-61, Department of Army Pamphlet, Toxic Chemical Agent Safety Standards
- AMCR 385-100, Army Materiel Command Regulation, AMC Safety Manual
- National consensus standards (most recent version), incorporated by reference in 29 CFR 1910 and 29 CFR 1926, in particular, American National Standards Institute Standards, National Electric Code, and National Fire Protection Association (NFPA) Codes
- Other health and safety-related codes, standards, regulations, and requirements as directed by the RVO or PMC

Figure 1-1 PMC Voluntary Protection Program Poster